

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A wiring board obtained by coating a copper paste on a ceramic green sheet and firing it to form a conductor layer and an insulating layer, the copper paste comprising a copper powder, an organic vehicle, an SiO_2 particle having an average particle size of ~~40~~ 30 nm or less, and a ceramic particle having an average particle size of 100 nm or less selected from the group consisting of Al_2O_3 , TiO_2 , CeO_2 and mullite.

2. (currently amended): A wiring board obtained by coating a copper paste on a ceramic green sheet and firing it to form a conductor layer and an insulating layer, the copper paste comprising a copper powder, an organic vehicle and an SiO_2 particle in an amount of 0.1 to 5 parts by mass per 100 parts by mass of copper powder having an average particle size of ~~40~~ 30 nm or less.

3. (canceled).

4. (original): The wiring board according to claim 1, wherein the conductor layer has a resistivity of $3 \times 10^{-6} \Omega \cdot \text{cm}$ or less.

5. (original): The wiring board according to claim 1, wherein the insulating layer comprises an alkali metal in amount of 0.5 mol% or less in terms of oxide.

6. (previously presented): The wiring board according to claim 1, wherein the ceramic particle is uniformly dispersed in the conductor layer.

7. (original): The wiring board according to claim 1, wherein a surface of the conductor layer is subjected to a plating treatment.

8. (currently amended): The wiring board according to claim 1, wherein a total area of inorganic material excluding ~~material~~ metal having a particle size of 2 μm or more is 5% or less of the sectional area of the fired conductor layer.

9. (currently amended): The wiring board according to claim 1, wherein in a cross section in a thickness direction of the conductor layer, a total area of inorganic material excluding ~~material~~ metal having a particle size of 3 μm or more is 2% or less of the sectional area of the fired conductor layer.

10. (original): The wiring board according to claim 8, wherein a surface of the conductor layer is subjected to a plating treatment.

11. (canceled).

12. (canceled).

13. (canceled).

14. (canceled).

15. (currently amended): A method for producing a wiring board obtained by coating a copper paste on a ceramic green sheet and firing it to form a conductor layer and an insulating layer, the copper paste comprising a copper powder, an organic vehicle, an SiO_2 particle having an average particle size of ~~40~~ 30 nm or less, and a ceramic particle having an average particle size of 100 nm or less selected from the group consisting of Al_2O_3 , TiO_2 , CeO_2 and mullite, said method comprising the steps of:

coating the copper paste on a ceramic green sheet;

exposing the coated sheet to a wet nitrogen atmosphere at 650 to 900°C so as to remove organic components; and

firing the sheet at 850 to 1,050°C after the exposing.

16. (previously presented): The wiring board according to claim 1, wherein the SiO₂ particle has an average particle size of 30 nm or less.

17. (previously presented): The wiring board according to claim 2, wherein the SiO₂ particle has an average particle size of 30 nm or less.

18. (previously presented): The wiring board according to claim 1, wherein the SiO₂ particle has an average particle size of 5 to 40 nm.

19. (currently amended): The wiring board according to claim 2, wherein a total area of inorganic material excluding metal having a particle size of 2 μm or more is 5% or less of the sectional area of the fired conductor layer.

20. (currently amended): The wiring board according to claim 2, wherein in a cross section in a thickness direction of the conductor layer, a total area of inorganic material excluding metal having a particle size of 3 μm or more is 2% or less of the sectional area of the fired conductor layer.

21. (new): The wiring board according to claim 1, obtained by coating a copper paste on a ceramic green sheet, exposing the coated ceramic green sheet to a wet nitrogen atmosphere at 650 to 900 °C to remove organic components, and then firing the sheet at 850 to 1050 °C to form a conductor layer having a resistivity of $3.2 \times 10^{-6} \Omega\text{-cm}$ or less and an insulating layer, wherein the SiO₂ particle constituting the copper paste a hydrophilic surface.

22. (new): The wiring board according to claim 2, obtained by coating a copper paste on a ceramic green sheet, exposing the coated ceramic green sheet to a wet nitrogen atmosphere

at 650 to 900 °C to remove organic components, and then firing the sheet at 850 to 1050 °C to form a conductor layer having a resistivity of $3.2 \times 10^{-6} \Omega \cdot \text{cm}$ or less and an insulating layer, wherein the SiO_2 particle constituting the copper paste has a hydrophilic surface.